

ORSETT BRIEFING PAPERS FOR PSYCHOLOGISTS

No.7 - Epidemiology

INTRODUCTION

Epidemiology can be defined as "the study of the distribution of disorders and associated factors in defined populations" ¹.

There are a number of stages involved ²:

- i) Define the population to be studied - eg: men living in England.
- ii) Identify individuals to be studied - eg: men suffering from depression.
- iii) Recruit identified individuals - eg: through GP surgeries.
- iv) Assess participants - eg: using rating scale for depression.
- v) Compare identified individuals with population as whole - eg: characteristics of men suffering from depression with those not suffering.

EPIDEMIOLOGICAL STUDIES

This is a technique using large amounts of data in order to compare the rates of disease in sub-groups of the population. More precisely, Last (1988) defines it as "the study of the distribution and determinants of health-related states or events in specified populations, and the application of this study to the control of health problems".

There are three ways of assessing the level of any illness or disorder:

¹ Goodman, R & Scott, S (1997) Child Psychiatry, Oxford: Blackwell Science p30.

² ibid p31.

a) Incidence - the number of new cases in a certain time.

b) Prevalence - the total number of cases in the population at a given time. This is usually expressed as cases per 1000, 10 000 or 100 000 of the population.

c) Risk factor - the condition or variable that increases the likelihood of the development of a disorder.

SUICIDES IN ENGLAND IN 1988

Incidence	4838
Prevalence	12 per 100 000

Table 1 - Comparison of terms for suicide ³.

The epidemiological study may be retrospective (working backwards from those ill now) or prospective (following group to see who becomes ill).

There are four types of epidemiological studies ⁴:

- i) cross-sectional - comparison of different groups.
- ii) case-control - sufferers vs non-sufferers
(usually retrospective).
- iii) cohort - follow a particular group over time.
- iv) controlled clinical trials.

There are two general problems with epidemiological studies ⁵:

- i) Selection bias in the groups being studied (ie: they are not comparable on demographic variables).
- ii) Confounding variables - uncontrolled or intermediate variables that influence the results.

³ Figures from Samaritans website (2000).

⁴ Backett, S & Robinson, A (1992) Epidemiological methods. In Freeman, C & Tyrer, P (eds) Research Methods in Psychiatry (2nd ed), London: Royal College of Psychiatrists.

⁵ Beaglehole, R; Bonita, R & Kjellstrom, T (1993) Basic Epidemiology, Geneva: World Health Organisation.

EXAMPLES OF EPIDEMIOLOGICAL STUDIES

1. Prevalence rate ⁶

The Epidemiological Catchment Area (ECA) ⁷ study involves around 20 000 people in five US cities. It was started in 1980 based around the universities of Yale, John Hopkins, Washington University, Duke, and UCLA.

Initial results, using DSM-III criteria, showed a 32% lifetime prevalence for any mental disorder; 20% for annual prevalence; and 15.4% for monthly.

2. Incidence rate ⁸

A study of 1000 British Gulf War veterans who presented themselves to the Ministry of Defence's medical assessment programme between 11 Oct 1993 and 24 Feb 1997. ICD-10 criteria were used to diagnose the symptoms shown.

190 of the sample were diagnosed with a mental disorder, mainly Post-Traumatic Stress Disorder, affective disorders, and adjustment disorder, and most cases had developed since returning to the UK.

43 more veterans had seen a psychiatrist since their return, but were diagnosed as having no psychiatric illness. However, 494 veterans showed symptoms of affective problems.

SOURCES

Backett, S & Robinson, A (1992) Epidemiological methods. In Freeman, C & Tyrer, P (eds) Research Methods in Psychiatry (2nd ed), London: Royal College of Psychiatrists

Beaglehole, R; Bonita, R & Kjellstrom, T (1993) Basic Epidemiology, Geneva: World Health Organisation

Cooke, D (1989) Epidemiological and survey methods. In Parry, G & Watts, F (eds) Behavioural and Mental Health Research: A Handbook of Skills and Methods, Hove, Sussex: Lawrence Erlbaum

Last, J.M (1988) A Dictionary of Epidemiology (2nd ed), Oxford: Oxford University Press

⁶ Regier, D.A et al (1993) The de facto US Mental and Addictive Disorders Service System: Epidemiological Catchment Area prospective study: 1 year prevalence rates of disorder in services, Archives in General Psychiatry, 50, 85-94.

⁷ Robins, L.N et al (1984) Lifetime prevalence of specific psychiatric disorders in three sites, Archives of General Psychiatry, 4, 949-958.

⁸ Coker, W.J; Bhatt, B.M; Blatchley, N.F & Graham, J.T (1999) Clinical findings for the first 1000 Gulf War veterans in the Ministry of Defence's medical assessment programme, British Medical Journal, 30/1, 290-294.

ORSETT BRIEFING PAPERS FOR PSYCHOLOGISTS

NO.1 - EMILE DURKHEIM (1858-1917)	April 2003
NO.2 - BASIC GENETICS	May 2003
NO.3 - QUASI-EXPERIMENTAL DESIGNS	May 2003
NO.4 - CLINICAL TRIALS	May 2003
NO.5 - BASIC PHARMACOKINETICS	May 2003
NO.6 - POST-MODERNITY AND GLOBALISATION	May 2003
NO.7 - EPIDEMIOLOGY	July 2003

AUTHOR: Kevin Brewer

ISSN No: 1740-4444

Orsett Psychological Services
PO Box 179
Grays
Essex
RM16 3EW
UK

orsettpsychologicalservices@phonecoop.coop

Psychology is an ever-growing subject area,
and it overlaps with many other subjects, like
sociology, medicine, and biology. Orsett Briefing
Papers for Psychologists offers short summaries of
different topics in subjects outside psychology
that can be useful to psychologists.